

AMENDMENTS TO THE CLAIMS

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) An ultrasonic diagnostic apparatus comprising:
an ultrasound probe in which a plurality of transducer elements for transmitting and receiving an ultrasonic wave to/from an object to be examined two-dimensionally arranged;
transducer element selecting means for selecting a transducer element to be used in ultrasound transmission and reception;
a signal processing unit for applying a delay time to a received wave signal received by the selected transducer element and performing signal processing;
an image processing unit for generating an image on the basis of a signal output by the signal processing unit; and
an image display unit for displaying the generated image, wherein
the image processing unit includes storing means for storing a first ultrasound image obtained by a scan performed with a first transducer arrangement selected by the transducer element selecting means and a second ultrasound image obtained by a scan performed with a second transducer arrangement selected by the transducer element selecting means so as to irradiate an ultrasound beam in a different direction than a beam direction of the first transducer arrangement, and image calculating means for combining the first ultrasound image and the second ultrasound image.

2. (Original) An ultrasonic diagnostic apparatus according to claim 1, wherein a beam formed by the second transducer arrangement intersects with that formed by the first transducer arrangement.
3. (Previously Presented) An ultrasonic diagnostic apparatus according to claim 1, wherein the image calculating means generates a combined image from tomographic information on a position where the ultrasound beams of the first ultrasound image and of the second ultrasound image intersect with each other.
4. (Original) An ultrasonic diagnostic apparatus according to claim 1, wherein the first ultrasound image is obtained by moving an aperture formed in the first transducer arrangement on a surface of the ultrasound probe and the second ultrasound image is obtained by moving an aperture formed in the second transducer arrangement on the surface of the ultrasound probe.
5. (Original) An ultrasonic diagnostic apparatus according to claim 1, wherein the second ultrasound image is collected on the same portion as the first ultrasound image.
6. (Previously Presented) An ultrasonic diagnostic apparatus according to claim 1, wherein the image processing unit reconstructs a three-dimensional image from a plurality of ultrasound images.

7. (Currently Amended) An ultrasonic diagnostic apparatus according to claim [[1]] 4, wherein the first ultrasound image is obtained by two-dimensionally moving the aperture of the first transducer arrangement on the surface of the ultrasound probe, and the second ultrasound image is obtained by moving the aperture of the second transducer arrangement in correspondence with a moving path of the first received signal.
8. (Original) An ultrasound diagnostic apparatus according to claim 1, wherein the first transducer arrangement or the second transducer arrangement is a separate array which forms a central position of ultrasound beams at a different position than that of ultrasound beams of the other transducer array.
9. (Previously Presented) An ultrasonic diagnostic apparatus according to claim 1, wherein the direction of the beam of the first transducer arrangement coincides with the direction of a normal line with respect to a body surface of the object.
10. (Original) An ultrasonic diagnostic apparatus according to claim 9, wherein the first transducer arrangement is a ring-shaped aperture and the second transducer arrangement is a strip-shaped aperture.
11. (Original) An ultrasonic diagnostic apparatus according to claim 10, wherein the transducer elements forming the ring-shaped aperture are selected so that the distances from the respective transducer elements to a focal point are identical.

12. (Original) An ultrasonic diagnostic apparatus according to claim 10, wherein in the second transducer arrangement, an oblique angle of ultrasound beam is arbitrarily set by adjusting phasing data for each transducer element row.
13. (Original) An ultrasonic diagnostic apparatus according to claim 1, wherein in the first transducer arrangement or the second transducer arrangement, an oblique angle of ultrasound beam is arbitrarily set by adjusting phasing data for each transducer element row.
14. (Original) An ultrasonic diagnostic apparatus according to claim 1, wherein an arrangement surface of the transducer elements forms a convex shape in a direction of ultrasound transmission.
15. (Original) An ultrasonic diagnostic apparatus according to claim 1, wherein the first transducer arrangement or the second transducer arrangement is divided into a plurality of transducer groups, and each transducer group is provided with a phasing circuit.
16. (Previously Presented) An ultrasound imaging method using an ultrasound probe including a two-dimensional array of transducer elements for transmitting and receiving an ultrasonic wave, comprising the steps of:
- selecting a transducer element forming a first transducer arrangement and
 - obtaining a first ultrasound image with an ultrasound scan;

selecting a transducer element forming a second transducer arrangement
generating an ultrasound beam in a direction intersecting with the direction of the
beam of the first transducer arrangement and obtaining a second ultrasound image
with an ultrasound scan;

storing the first ultrasound image and the second ultrasound image;
combining the first ultrasound image and the second ultrasound image; and
displaying the combined image.

17. (New) An ultrasound imaging method according to claim 16, wherein at least one of the first scan and the second scan includes an oblique scan, in which the direction of ultrasound beam forms an angle between 0° and 90° with respect to the surface normal of the transducer element array in the plane defined by the direction of ultrasound beam and the surface normal.

18. (New) An ultrasonic diagnostic apparatus of claim 1, wherein the two-dimensional transducer elements are arranged to form a two-dimensional transducer element array.

19. (New) An ultrasonic diagnostic apparatus of claim 1, wherein at least one of the first scan and the second scan includes an oblique scan, in which the direction of ultrasound beam forms an angle between 0° and 90° with respect to the surface normal of the transducer element array in the plane defined by the direction of ultrasound beam and the surface normal.